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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,856	01/29/2004	Yasuyuki Ishii	02910.000112	2622

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,856

Applicant(s)

ISHII ET AL.

Examiner

Sophia S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,9,10,12,14,17,18,20,22,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 3,5,7,8,11,13,15,16,19,21,23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/29/04 & 3/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 3b (Figures 2 and 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because of the inclusion of legal phraseology, such as "comprises" (page 33, line 4). Correction is required. See MPEP § 608.01(b).
3. The abstract of the disclosure is objected to because of the following informality: page 33, line 1, "bladeis" should be "blade is". Correction is required.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 4 and 6-24 are objected to because of the following informalities:
 - a. Claim 4, line 2, "particle is" should be "particles are".
 - b. Claim 6, line 4, "0.6to" should be "0.6 to".
 - c. Claim 7, line 4, "particle" should be "particles".
 - d. Claim 8, line 2, "particle" should be "particles".
 - e. Claim 9, line 3, "bladefor" should be "blade for".
 - f. Claim 9, lines 3-4, "said remaining developer" should be "a remaining developer" because it is the first time to use this terminology.
 - g. Claim 9, line 4, "said electrophotographic photosensitive" should be "an electrophotographic photosensitive" because it is the first time to use this terminology.
 - h. Claim 10, line 2, "particle is" should be "particles are".
 - i. Claim 11, line 2, "particle is" should be "particles are".
 - j. Claim 12, line 2, "particle is" should be "particles are".
 - k. Claim 15, line 4, "particle" should be "particles".
 - l. Claim 16, line 2, "particle" should be "particles".
 - m. Claim 17, line 6, "bladefor" should be "blade for".
 - n. Claim 17, lines 6-7, "said remaining developer" should be "a remaining developer" because it is the first time to use this terminology.

- o. Claim 18, line 2, "particle is" should be "particles are".
- p. Claim 19, line 2, "particle is" should be "particles are".
- q. Claim 20, line 2, "particle is" should be "particles are".
- r. Claim 23, line 4, "particle" should be "particles".
- s. Claim 24, line 2, "particle" should be "particles".
- t. Claim 25, lines 4-5, "said remaining developer" should be "a remaining developer" because it is the first time to use this terminology.
- u. Claim 25, line 6, "andan" should be "and an".
- v. Claim 26, line 9, "said remaining developer" should be "a remaining developer" because it is the first time to use this terminology.

Appropriate correction is required.

Claim Rejections – 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 2, 6, 9, 10, 14, 17, 18, 22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suwa et al. (US Pat. No. 5,646,718) in view of Yamaoka et al. (US Pat. Pub. No. US 2004/0121162 A1).

Suwa et al. discloses a process cartridge 10 attached to a body of an image forming apparatus (column 9, line 66 to column 10, line 7; Figures 4 and 5) comprising: an electrophotographic photosensitive body 1; a charging means 2; a cleaning blade 60; an abutment portion that abuts on the electrophotographic photosensitive body 1 (Figure 10), lubricant L including insulating particles (silicone resin) L2 and conductive particles (titanium oxide or zinc stearate) L1 being coated on the abutment portion (column 6, lines 9-14 and 58-64 and Figure 6), wherein a mean particle size of each of the insulating particles (silicone resin) L2 lies in a range of 0.2 to 1.0 μm (0.5 to 10 μm ; column 6, lines 58-64) and a mean particle size of each of the conductive particles (titanium oxide, zinc stearate) L1 lies in a range of 0.4 to 4.0 μm (0.5 to 1.0 μm ; column 6, lines 9-14); the mean particle size of the insulating particles (silicone resin) L2 lies in a range of 0.6 to 0.8 μm (0.5 to 10 μm ; column 6, lines 58-64) and the mean particle size of the conductive particles (titanium oxide, zinc stearate) L1 lies in a range of 1.0 to 2.0 μm (0.5 to 1.0 μm ; column 6, lines 9-14); an attachment portion detachably attached to a process cartridge 10 (inherently; column 10, lines 4-7); and a carry means 9, 5, 7 for carrying a recording medium P (Figure 4).

Suwa et al. differs from the instant claimed invention in not disclosing the particle size is at D50 (integration of volumes of particles calculated from a smaller particles size side arrives at 50% with relative to a total integration thereof).

Yamaoka et al. discloses an average particle size of the particulate lubricating function-imparting agent is preferably from 0.5 to 6 μm (paragraph [0044], lines 9-11), and the average particle size means "d50 (50% average particle size)" (paragraph [0044], lines 11-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the average particle size at d50 as taught by Yamaoka et al. to the mean particle size of Suwa et al. because Yamaoka et al. suggests to use the d50 measurement to measure the average (or mean) particle size of lubricants.

9. Claims 4, 12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suwa et al. in view of Yamaoka et al. as applied to claims 1, 9, and 17(respectively) above, and further in view of Hespenheide (US Pat. No. 3,717,409).

Suwa et al. in view of Yamaoka et al., as discussed above, differs from the instant claimed invention in not disclosing the conductive particles are hydrophobically processed.

Hespenheide discloses an image forming apparatus comprising a cleaning station 40; a dry solid lubricant (column 3, lines 4-11); and the lubricant being hydrophobically processed (column 3, lines 37-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the lubricant being hydrophobically processed as taught by

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Hespenheide to the conductive particles L1 (also lubricants) of Suwa et al. in view of Yamaoka et al. because Hespenheide teaches the hydrophobic lubricants are preferred lubricants (Hespenheide; column 3, lines 38-39).

Allowable Subject Matter

10. Claims 3, 5, 7, 8, 11, 13, 15, 16, 19, 21, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yano et al. (US Pat. No. 5,321,482) discloses an image forming apparatus comprising a process cartridge, the cartridge comprising a photosensitive drum; a cleaning blade; and a lubricant being painted on the blade.

Kato et al. (US Pat. No. 5,995,785) discloses an image forming apparatus comprising lubricant being coated on a cleaning blade; the lubricant including insulating particles and conductive particles; an average particle size of the conductive particles being about 0.5 to 1.0 μm ; and an average particle size of the insulating particles being about 0.5 to 10 μm

Sato (US Pat. Pub. No. US 2002/0031384 A) discloses an image forming apparatus comprising a cleaning blade having lubricants.


Kuribayashi et al. (JP 06-035385 A) discloses an image forming apparatus comprising a cleaning blade having lubricants.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
July 18, 2005